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Conference Abstract

The Genomic Observatories Metadatabase

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Abstract

The Genomic Observatories Metadatabase (GeOMe, http://www.geome-db.org/) is an open access repository for geographic and ecological metadata associated with biosamples and genetic data. It contributes to the informatics stack – Biocode Commons – of the Genomic Observatories Network (https://gigascience.biomedcentral.com/articles/10.1186/2047-217X-3-2). While public databases have served as vital repositories for nucleotide sequences, they do not accession all the metadata required for ecological or evolutionary analyses. These metadata are especially important for process oriented, time-series research, as for example, at Long Term Ecological Research (LTER) sites or longitudinal public health studies. GeOMe fills this need, providing a user-friendly, web-based interface for both data contributors and data recipients. The interface allows data contributors to create a customized yet standards-compliant spreadsheet that captures the temporal and geospatial context of each biosample. These metadata are then validated and permanently linked to archived genetic data stored in the National Center for

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Biotechnology Information's (NCBI's) Sequence Read Archive (SRA) via unique persistent identifiers. By linking ecologically and evolutionarily relevant metadata with publically archived genetic sequence data in a structured manner, GeOMe provides an important linchpin across all levels of biodiversity.

Keywords

Genomic Observatories, genomics, metadata

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